

## TREATMENT OF CANCER OF THE BREAST.

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I HAVE been able to follow up a certain number of cases of tumor of the breast for a considerable time after operation.

A brief statement of the clinical facts of these cases will be made. It will then be possible to reach some conclusion as to the value to be attached to them. A brief statement in regard to a few cases of advanced tumor of the breast will also be made. In some of these cases I operated; in others there was only internal treatment. It may be said that there is no very definite line to separate the operable cases from the inoperable ones. There is no very sure way of determining the virulence of a breast tumor until we have the entire history and destiny of a given case. Yet it may be possible for us to be approximately correct in our prognosis. The surgeon cannot always be sure of the extent of the infection until he operates, and then sometimes he cannot be positive.

CASE I.—Miss F., thirty-two years of age, in May, 1888, noticed a lump in her right breast just above the nipple. In September of the same year the family physician enucleated the growth, leaving the rest of the breast. In January, 1889, she came to me for advice, and was persuaded to have the entire breast removed. I operated at once, although she was in poor general health. There was primary union in all parts of the wound. She took the bromide of arsenic and the carbonate of lime for more than a year. She slowly regained her health, and became as well and strong as ever. At the present time she has a perfectly normal scar. Her mother died of cancer of the left breast at the age of forty-two years. At sixty years of age

her grandmother had cancer of the breast. In January, 1895, I operated upon this patient for hydrocele of the round ligament.

CASE II.—Miss C., twenty-six years of age, had cancer of the left breast which had been growing for a year. Previous to that time the disease had not been noticed. This patient's father died of cancer. December 1, 1888, I removed the breast and contents of the axilla, which had become involved. It is worthy of note that this patient had during the previous year nursed several cases of cancer. The two questions of infection and heredity were considered. Of course there was no evidence in either direction. The bromide of arsenic and the carbonate of lime were given for five or six months. January 26, 1889, I removed a hard nodule from the scar, two nodules above and three nodules at some distance below it. Later in the year she was put under the care of an irregular practitioner. I heard that she died of consumption in the summer of 1893. Did she die of cancer of the lung?

CASE III.—Mrs. B., forty-six years of age, had noticed a tumor growing in the lower part of her right breast for about two months. She did not know when it began. February 15, 1889, I removed the breast and the contents of the axilla. There was primary union, and she was up and about in a few days. Dr. W. H. Bates, of this city, made the microscopical examination, and confirmed the diagnosis of cancer. This patient took the bromide of arsenic and the carbonate of lime for two years after the operation, with occasional intermissions. In the latter part of the year, 1893, I removed some tubercular glands from the apex of the right axilla, and since that time she has been in good health. The scar after the breast amputation was soft and normal. The scar after the second operation was also soft and normal.

CASE IV.—Mrs. L., thirty-four years of age, had a tumor in the right breast which had been growing for a year. In the mean time a small tumor appeared in the left breast. June 25, 1889, I removed the right breast and the contents of the axilla which had become involved. There was primary union of the entire wound, and the patient was up in two weeks. October 3, 1889, I removed the left breast, leaving the axilla, as it was not involved. There was primary union of the wound in a few days. The patient declined to have both operations performed at the same time. This patient was kept on the bromide of arsenic for more than two years, with occasional intermissions. The growths were examined in the Hoagland Labo-

ratory, and the clinical diagnosis of cancer was confirmed. The scars are soft and normal at the present time, six years after the operations. In the mean time, the patient has had two healthy children, and she is in perfect health.

CASE V.—Mrs. H., thirty-six years of age, in March, 1891, found a lump in her right breast, but did not know when it began. I operated December 17, 1891, removing entire breast and contents of axilla. She was “run down” in health, and very much depressed in spirits. There was primary union of the wound, and she left for home in the country soon after the operation. Her improvement was slow, but she was better after four or five months. It was more than a year before she regained good use of her arm. She took the bromide of arsenic and the carbonate of lime. The bromide of arsenic was continued for about three years, with occasional intermissions. At present she is in perfect health, and has a perfectly normal scar. The growth was examined in the Hoagland Laboratory, and the diagnosis of cancer was confirmed. The pathologist thought that the operation would be followed by speedy recurrence, and a fatal issue of the disease.

CASE VI.—Mrs. O., forty-eight years of age, had her left breast bruised in February, 1891. In the mean time, a cancer developed at the seat of the bruise. She came under my care, and February 25, 1892, I removed the tumor and the contents of the axilla. The diagnosis was confirmed by the examination in the Hoagland Laboratory. There was primary union of the wound of operation. This patient was kept on the bromide of arsenic for more than two years. Two years after the operation a small ulcer appeared in the scar. I excised this ulcer as far as the healthy tissue, and continued the bromide of arsenic. Since then the patient has been in good health, and the scar has become normal again.

CASE VII.—Mrs. R., forty years of age, had a large tumor in each breast, and one on each side of her neck. These tumors had been growing for about two years. The right breast was beginning to ulcerate and bleed. March 1, 1892, I removed the right breast as far as possible, but there was some infected tissue left. The bromide of arsenic was given to this patient, and the parts healed rapidly by granulation and secondary union. The microscopical examination did not make a positive diagnosis, but the case was said to be malignant and hopeless. In time the scar of operation, as well as the adjacent parts, became quite normal. The tumors in the neck became

much smaller. The left breast also diminished in size. The patient was anxious, and requested me to remove the left breast. I operated October 3, 1892, much in the same manner as before. The repair was less prompt than after the previous operation. When the special treatment was omitted for any length of time, the neoplasm began to show itself in the line of the scar; but on pushing the remedies the case improved. The treatment was continued for over two years, and the patient is at the present in a condition of cure.

CASE VIII.—Mrs. T., forty-two years of age, had a cancer of the right breast treated for about two years, with the idea of “scattering it.” The glands of the axilla had become involved. April 8, 1892, I removed the entire breast and the contents of the axilla. Primary union occurred throughout the entire wound in a few days, and the patient was up and about. With occasional intermissions the bromide of arsenic was given to this patient for the subsequent two years. I saw her in May, 1894, when she had a normal scar, and was in general good health. She removed to Montreal, and I have not heard of her since.

CASE IX.—Mrs. P., fifty-five years of age, had cancer of the left breast for more than a year. The tissues were extensively involved and infiltrated, and her prospect was not very good. She was promised temporary relief by means of an operation. May 3, 1892, I removed the entire breast and the contents of the axilla. I was not at all certain that I had removed the infected tissue. The repair of the wound was very slow. For months the scar was red and vascular, and the general health was not good. The marked feature of this case was the great despondency under which the patient labored. The dose of bromide of arsenic was at first one-fortieth of a grain, and it was finally increased to one-tenth of a grain. This remedy was continued for more than two years, with occasional intermissions. At the present time the scar is soft and normal, and she appears to be perfectly well. The microscopical examination confirmed the clinical diagnosis. The case had been considered hopeless.

CASE X.—Mrs. G., forty-nine years of age, had a hard cancer of the left breast, which had been growing for about two years, and had extensively involved the axilla. Her mother died of cancer, near the age of fifty, without operation. November 6, 1892, I removed the breast and the contents of the axilla as completely as possible. It required much tension on the sutures to bring the flaps together, so extensive had been the exsection. The appearance and

feel of the tissues was the only guide as to the removal of the infected tissue. This patient took the bromide of arsenic for more than two years. The tension upon the soft parts for six months was so great that it required adhesive straps to keep the scar in good condition. At the end of that time the soft parts appeared to slide over and adjust themselves to their new relations. At the present time the health of this patient is fully re-established. There has been no local recurrence, and the scar is perfectly normal.

CASE XI.—In January, 1893, I saw Mr. D. in consultation with his physician. Mr. D. was dying from cancer of the sigmoid flexure of the colon. His wife had a year-old cancer of the left breast involving the glands of the axilla. The breast had broken down and was bleeding, and the odor had become offensive. In order to promote her personal comfort I removed the diseased tissue as far as possible. The loss of structure was extensive, and the soft parts could not be brought together. At the end of two weeks she began to nurse her husband again, and continued to do so until his death. She took the bromide of arsenic from time to time. Fifteen months after the operation there was an extensive scar in which were nodules and points of ulceration. I then gave her five-drop doses of the solution of the bromide of gold and arsenic. The ulcers healed, the nodules went away, and the pains ceased. Her general health has been restored. The scar is apparently normal. The examination was made in the Hoagland Laboratory by Professor Van Cott, who confirmed the diagnosis of cancer.

CASE XII.—Mrs. F., about thirty-five years of age, had a cancer growing in the right breast for a year, and it had involved the axilla. The nodules in both the breast and the axilla were very hard and firm. October 10, 1893, I removed as completely as possible the breast tumor and the contents of the axilla, obtaining primary union of the entire wound. She went to her home in the country soon after the operation. She has been taking the bromide of arsenic ever since, with occasional intermissions. Professor Van Cott made the examination, and confirmed the diagnosis of cancer. I hear from this patient from time to time. Her general health has been restored, and she has a soft and movable scar.

CASE XIII.—Mrs. G., fifty-eight years of age, had a cancer of the right breast about a year, involving the glands of the axilla. She had considerable pain, and was very much depressed. January 10, 1894, I operated in the usual way, and found it difficult to bring the

edges of the wound together, so much tissue had to be removed. There was primary union of the entire wound in a few days, with considerable vascularity and redness of the scar. From time to time she has been taking the bromide of arsenic. Her general health appears to have been fully restored, and there is no sign of local recurrence.

CASE XIV.—Mrs. C., forty-two years of age, had a hard lump in her left breast just above the nipple, causing considerable pain. Did not know how long it had been coming. The case was one of cancer of the breast with involvement of the axilla to a limited extent. April 25, 1893, Dr. Rogers removed the breast and the contents of the axilla. There was primary union of the entire wound in a few days. The bromide of arsenic, with occasional intermissions, has been continued up to the present. She is now in perfect health, and has a soft and normal scar.

CASE XV.—Miss H., forty-five years of age, had cancer of both breasts, which she had observed for about a year. The right axilla was involved. No trace of disease could be found in the left axilla. July 5, 1894, I removed the growth on the right side and the contents of the axilla. The excision was very extensive. It was very difficult to bring the flaps together, and even then there was a small space left open in the centre of the wound. The shock was very severe. The patient's health was in a low state, and it was several days before complete reaction took place. Primary union, except in the small space in the centre, resulted. The patient was taken into the country, where she improved very much during the hot weather. September 20, 1894, I removed the left breast, and did not disturb the axilla as it was not involved. There was only slight shock, and primary union occurred throughout the wound, and the patient was up in a few days. After the first operation five-drop doses of the solution of the bromide of gold and arsenic were given in water after meals, with occasional intermissions. This remedy she has been taking ever since. Her general health has been fully restored, so far as can be seen. The scars on both sides are soft and normal, and there is no indication of recurrence of the disease.

CASE XVI.—Mrs. K., forty-two years of age, had a year-old cancer of the right breast, with involvement of the axilla. She was in a poor state of health, and was much depressed in spirits. October 5, 1894, I removed breast and axillary contents, and obtained primary union of the entire wound. She was given the bromide of arsenic in one-fortieth-grain doses, with occasional intermissions.

Her general health slowly returned to its normal standard. The scar is soft and normal, and there is no sign of the disease coming back.

CASE XVII.—Mrs. R., thirty-six years of age, had a cancer of the right breast for two years, with much involvement of tissue. December 18, 1894, I removed the growth, together with the contents of the axilla. The operation was extensive and required the excision of a portion of the axillary vein.

There was some swelling of the arm for a few weeks. Primary union took place in the breast wound. The axillary wound healed by granulation. In the course of a few months the patient regained her general health, and at the present has no local recurrence. From the time of the operation she has been taking the bromide of gold and arsenic, with occasional intermissions. In this case the most that I expected was to gain a brief respite from the ravages of the disease. It is yet too soon to say that there will be a cure.

I have notes of seven cases of advanced tumor of the breast which I operated upon for temporary relief. It does not seem to be important to take up time with them individually. What I have to say may be stated as follows: A patient comes with a large tumor of the breast, and requests you to operate. In operating you find that the local infection has extended beyond the territory of reasonable and safe operation. And the operation is completed as well as possible under the circumstances. It may be that primary union of the wound takes place. It may be that repair goes on by granulation. In any case the repair does not take a long time. In a few weeks or months the disease reappears locally, and in brief time carries off the patient. This unfortunate result may be due to the extent and virulence of the infection, or to the susceptibility and non-resistance of the tissues of the patient who, under special conditions, is incurable.

It may be that the method of operating is important. It is admitted that there may be more than one advisable method. In giving the steps of my operation, the methods of others are not criticised. It is evident that any method of operating requires experience to carry it out well. This is based upon the principle that experience is the best teacher.

It is not necessary to go over the aseptic preparation of a

patient for amputation of the breast. Every one is familiar with such preparation. Yet the importance of this point must be emphasized.

Tumors of the breast may be divided into three kinds. (1) Those in which the surgeon may operate with the hope of curing them. (2) Those in which an operation may give temporary relief and comfort. (3) Those in which an operation is impossible and inadvisable. It is evident that the cardinal precept of work must be—the earlier an operation is performed in a case of tumor of the breast, other things being equal, the more certain will be the prospect of a cure.

In an operation of the kind under consideration, there are two important rules of practice: (1) The minimum of time should be taken for the operation. (2) The tumor, as well as its infected environment, must be removed. The earlier the operation, the more successful will be the latter rule of practice. Experience and skill, accompanied by dexterity, will meet the requirements of the first rule.

In the case of an incipient tumor of the breast, the entire breast must be removed. I have seen disaster follow the neglect of this rule. In an advanced operable case, it may be necessary to go beyond the gland structure of the breast in order to remove all the infected tissue. The rule for detecting this infected tissue is based upon the individual experience of the surgeon. He has two guides, the appearance and the “feel” of the suspected tissue. Does the periglandular tissue appear to feel normal? If it does, the surgeon may cease to exist.

The time taken in operating may be from fifteen to forty-five minutes. In operating on the male breast, which is so much smaller than the female, less time is taken. In one of my cases the time was fifteen minutes; in another the time was ten minutes; in still another the time was six minutes. Two of these cases had a complete cure, and the third died of a double pneumonia in a few days after the operation. The time generally required by me in operating in one of these cases has been from twenty-five to thirty-five minutes.

I make a continuous incision around the tumor, including,



if possible, all the infected tissue, then the growth is rapidly excised, the hands of assistants following the knife to repress and control hæmorrhage. Pressure-forceps are freely used on all the larger bleeding vessels. If any adjacent or subadjacent portions of infected tissue remain they are quickly cut out. In all cases the submammary fascia is removed, and the sheath of the great pectoral muscle is dissected off in front. A sterilized towel is pressed upon the wounded surface to control the oozing. The contents of the axilla are now excised. The incision extends from the angle of the breast wound so as to expose the growth in the axilla. A pair of long-jawed pressure-forceps is pushed along the surface of the axillary growth so as to grasp the non-infected tissue. With a knife or a pair of scissors, carried along the jaws of the forceps, the tumor is quickly cut away, leaving the forceps in place to prevent hæmorrhage. The process is repeated, using as many long-jawed forceps as required, until the entire growth is cut out.

The pressure-forceps are now removed from the breast wound, which is again disinfected. The bleeding has now for the most part ceased, but a point or two may need twisting. As a rule, no ligatures are needed, the sutures, made of silk, acting as such, when applied as follows: Long curved needles are passed through the flaps, and under the entire base of the wound, and are then tied so as to bring the entire surface of the wound together. These are called deep sutures: and if we refer to their hæmostatic effects, they may be called suture ligatures. Usually the axillary wound is sutured in the same manner, so as to bring its walls into apposition. By this means hæmorrhage is arrested. If any considerable vessel is still bleeding, it may be tied with a suture ligature. The next step is to put in superficial sutures along the edges of the flaps to bring and hold them in apposition, in order to obtain cutaneous primary union. It is rare that primary union fails. In one case not mentioned in the above report, for some reason not well ascertained, I had some suppuration of the wound, accompanied by a serious attack of pneumonia. But the final result was excellent. Even in cases in which the exsection is so extensive that the flaps cannot be brought

together, I use the deep sutures. In other cases in which there has been extensive exsection of the contents of the axilla, I have packed the axillary wound with aseptic gauze, and have obtained primary union of the breast wound. Good secondary union of the axillary wound is thus obtained.

In cases of malignant disease, in which systemic poisoning has taken place to any considerable extent, the protoplasm of the cells become depressed in vitality, and there is a certain point in this depression, from which reaction cannot take place by any means at present known. These cases are incurable, even if they are cases upon which we can operate. The toxic product may come from the infecting substance, from the waste of the cells of the body in general, or of from both of these sources. My theory is that an early operation may remove the entire infection, and so effect a cure. But this does not provide against reinfection. This must be sought in some remedy that antidotes the infection. It is probable that more than one remedy will be found. It may be the toxine of some micro-organism. It may be one of the many remedies now known. It may be some remedy yet to be discovered.

As to my cases, Case I has been immune since January, 1889, to the present, over six years. Case II went from December, 1888, to the summer of 1893, and then died of consumption; I suspect she had cancer of the lungs. Case III has been immune since February, 1889, to the present, over six years. Case IV, both breasts being involved, has been immune since June, 1889, to the present, nearly six years. Case V has recovered and remained immune since December, 1891. Case VI has been immune for six years. Case VII has remained without local recurrence for nearly four years, and the development of the inoperable growths in the neck have been arrested. Case VIII has had no return of the disease after three years. Case IX after three years remains immune. Case X after nearly three years has no recurrence of the disease. Case XI appears to-day, after two and a half years, to be immune. Case XII, operated on October 10, 1893, has recovered her health. Case XIII, after one year and five months, has had no local recurrence. Case XIV

has remained immune after more than three years. Case XV at the end of nearly one year is in good health. Her disease was extensive. There is no local recurrence, but I do not say that she is cured. Case XVI, operated on October 5, 1894, appears to be immune. Case XVII, operated on December, 1894, is in good condition, but it is too soon to say that she is cured.

If we were to judge from the seventeen cases above briefly reported, I would conclude that a number of cases operated upon by me and lost sight of, had turned out equally well, provided the after-treatment had been the same. This treatment has consisted, for the most part, in the persistent use of the bromide of arsenic. In some cases this remedy has been given for two or three years, with occasional intermissions. The dose has been from one-fortieth of a grain to one-tenth of a grain. I begin with a smaller dose, and as time goes on the dose is increased in size. In some cases I have employed the solution of the bromide of gold and arsenic, in doses from five to fifteen drops after meals. These remedies have been given on the theory that they are antagonistic to the infection of the disease under consideration. The carbonate of lime has been given to some extent, as an adjuvant to the other remedies, but it is of inferior value, as compared with arsenic and gold.